

RackChiller CDU800 Coolant Distribution Unit

Data Solutions



FEATURES

- Redundant high-performance, leak-free pump system
- Integrated variable speed drives
- Coolant connections through top or bottom panel
- Integrated 10 inch touch panel display
- Remote control features through Ethernet, SNMP v3, Modbus
- On-board integrated leak detection
- Unrivalled power density – fits into standard data center footprint
- Serviceable during operation – no need for shut down during system maintenance
- Redundant system layout minimizes risk for single points of failure
- Integrates with nVent Guardian Management Gateway and sensors portfolio

SPECIFICATIONS

General Data

- 800 kW of cooling capacity @ 6 K (850 LPM Primary)
- Pipe Connection: 3 inch ID hygienic tri-clamp
- Liquid Temp Range: 20–70°C (68–158°F)

Primary Rating

- Coolant: treated water with up to 20% PG
- Maximum Allowable Flow Rate: 1200 LPM (317 GPM)
- Maximum Head Loss (at 850 LPM, Water): 1.3 Bar (19 psi)
- Maximum System Pressure: 10.3 Bar (150 psi)
- System Volume: 50 L (13 Gal)
- Primary Filter Size: 250 micron

Secondary Performance

- Coolant: treated water with up to 30% PG
- Maximum Flow (single pump): up to 1200 LPM (317 GPM) at 1.8 bar (25 psi)
- Maximum Flow (dual pumps): up to 1200 LPM (317 GPM) at 2.7 bar (39 psi)
- Maximum System Pressure: 8.6 Bar (125 psi)
- Pressure Relief Valve Activation Pressure: 9.0 Bar (130 psi)
- System Volume: 100 L (26 Gal)
- Secondary Filter Size: 50 micron
- 25 micron filter option

INDUSTRY STANDARDS

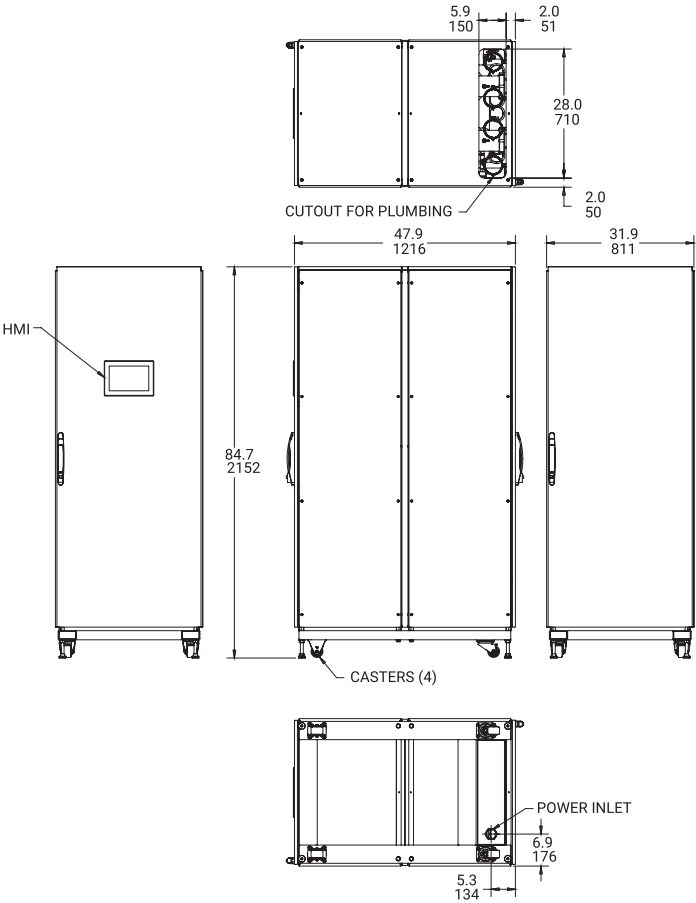
UL/cUL 60335-2-40 Listed; File No. SA7402

APPLICATION

The nVent HOFFMAN RackChiller CDU800 is designed for efficient and safe supply of IT equipment. The entire system is focused on providing the highest reliability, availability, and serviceability for supporting direct-to-chip liquid cooling. The CDU800 is fed from a primary facility water system (FWS), where the integrated pumps drive the secondary technology cooling system (TCS) cooling loop flow. The heat exchanger transfers the excess heat from the secondary coolant to the primary. The complete system is integrated into an aesthetical enclosure with removable side panels and doors. The CDU can be installed onto a slab or raised floor, inrow with equipment racks or into a separate facility room.

Technical Data

Catalog Number	CDU8004LA03A	CDU8004LA03B
Generation	3.2	3.2
Input Voltage (V)	380–480	380–480
Power Feed	Single	Single
Phase	3	3
Rated Frequency (Hz)	50/60	50/60
Rated Current (A)	40	40
Power Consumption (kW)	22.2	22.2
Noise (dB)	68	68
Mechanical	With Primary Valve	With Primary Valve
Height (in/mm)	87/2200	87/2200
Depth (in/mm)	31/800	31/800
Depth (in/mm)	47/1200	47/1200
Dry Weight (lbs/kg)	2502/1135	2502/1135
Packaged Weight (lbs/kg)	2831/1285	2831/1285
Country of Origin	USA	Germany



APPLICATION

GB200-NVL72 Support

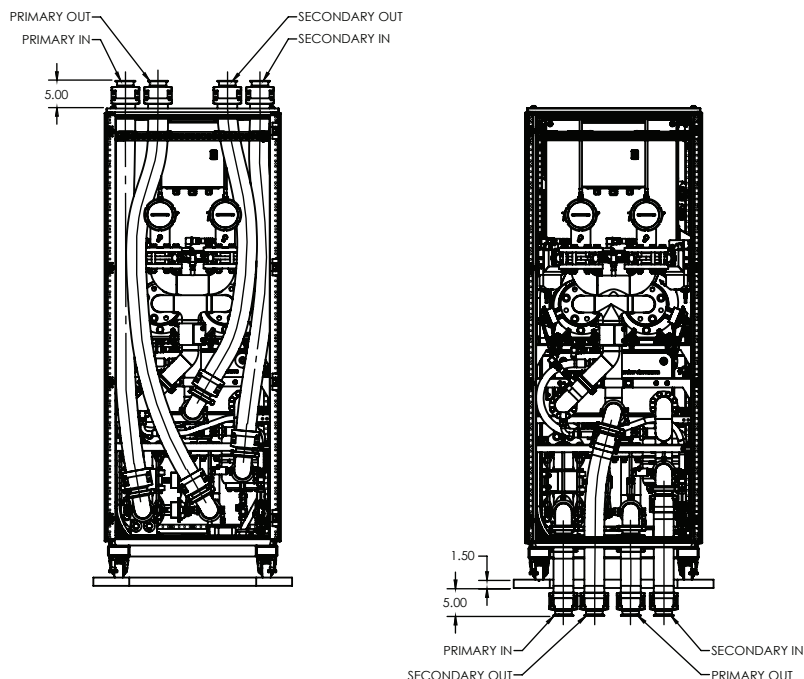
Number of GB200–NVL72 Racks Supported	5	
Cooling Capacity	575 kW	
Approach Temperature Differential (ATD)	4K (°C)	7.2 °R (°F)
Primary [FWS] Fluid	Water	
Primary [FWS] Flow Rate	985 LPM	260 GPM
Primary [FWS] Supply Temperature	41°C	105.8°F
Secondary [TCS] Fluid	PG25	
Secondary [TCS] Flow Rate	690 LPM	182 GPM
Max External dP	365 kPa (Single Pump) 386 kPa (Dual Pump)	53 PSI (Single Pump) 56 PSI (Dual Pump)
Secondary [TCS] Supply Temperature	45°C	113°F
Secondary [TCS] Return Temperature	57.4°C	135.3°F

ACCESSORIES

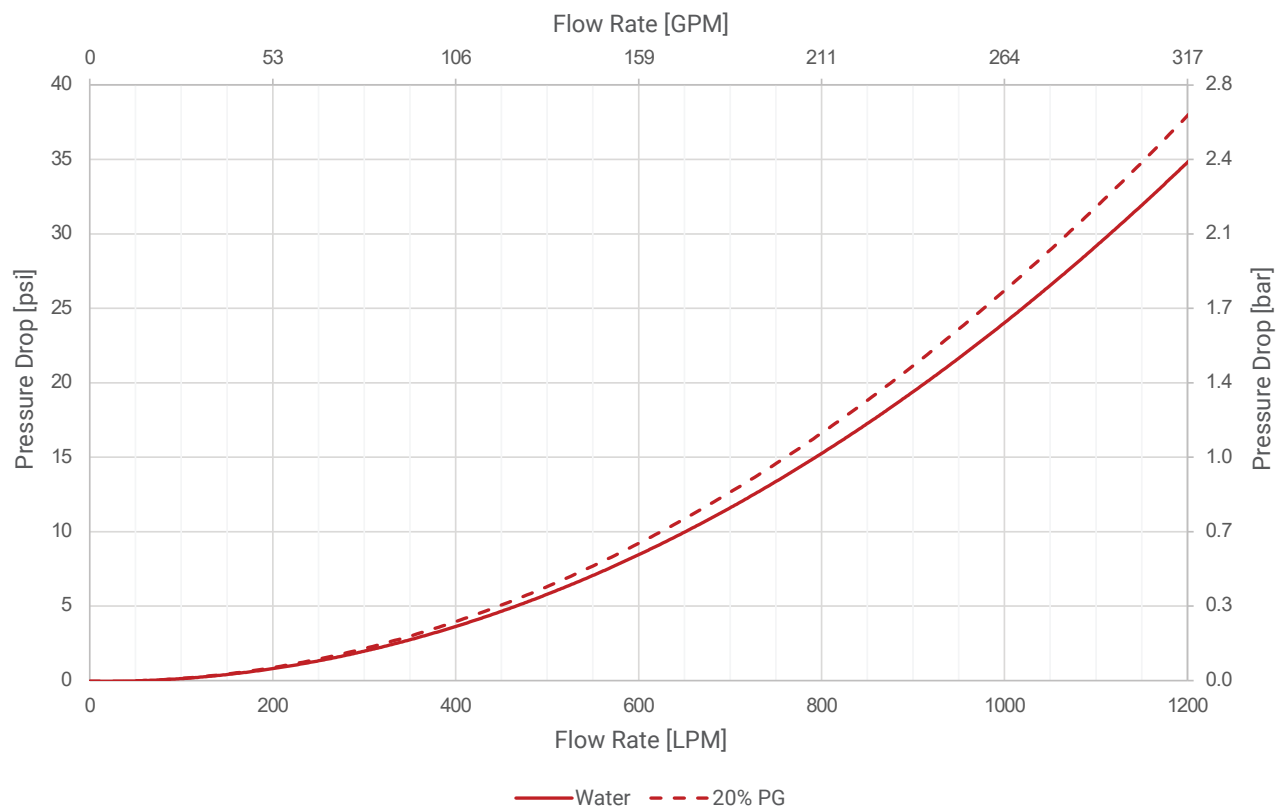
Hose Kits

Each hose kit is made from 3" black synthetic rubber with synthetic fabric and wire helix reinforcement surrounding the hose with 3" stainless steel tri-clamp connection components on each end.

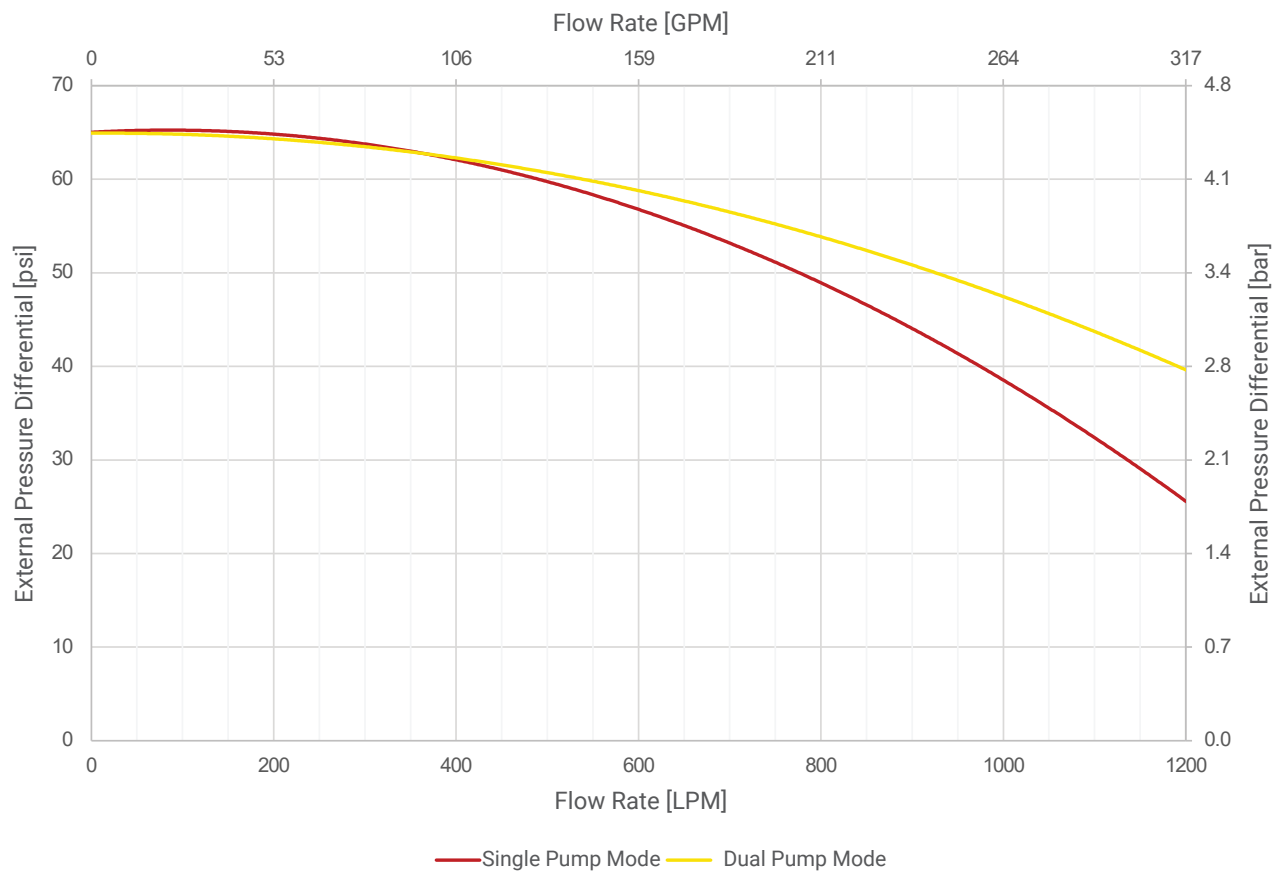
Catalog Number	Connection Distance Above CDU / Below Floor Tile	Coolant Loop	Feed Location	Connection Size	Connection Type	Material	Country of Origin
CDU800H3PTA	5 in/125 mm	Primary	Top	3 in	Tri-Clamp	Reinforced EPDM	USA
CDU800H3STA	5 in/125 mm	Secondary	Top	3 in	Tri-Clamp	Reinforced EPDM	USA
CDU800H3PBA	5 in/125 mm	Primary	Bottom	3 in	Tri-Clamp	Reinforced EPDM	USA
CDU800H3SBA	5 in/125 mm	Secondary	Bottom	3 in	Tri-Clamp	Reinforced EPDM	USA
CDU800H3PTB	5 in/125 mm	Primary	Top	3 in	Tri-Clamp	Reinforced EPDM	Germany
CDU800H3STB	5 in/125 mm	Secondary	Top	3 in	Tri-Clamp	Reinforced EPDM	Germany
CDU800H3PBB	5 in/125 mm	Primary	Bottom	3 in	Tri-Clamp	Reinforced EPDM	Germany
CDU800H3SBB	5 in/125 mm	Secondary	Bottom	3 in	Tri-Clamp	Reinforced EPDM	Germany

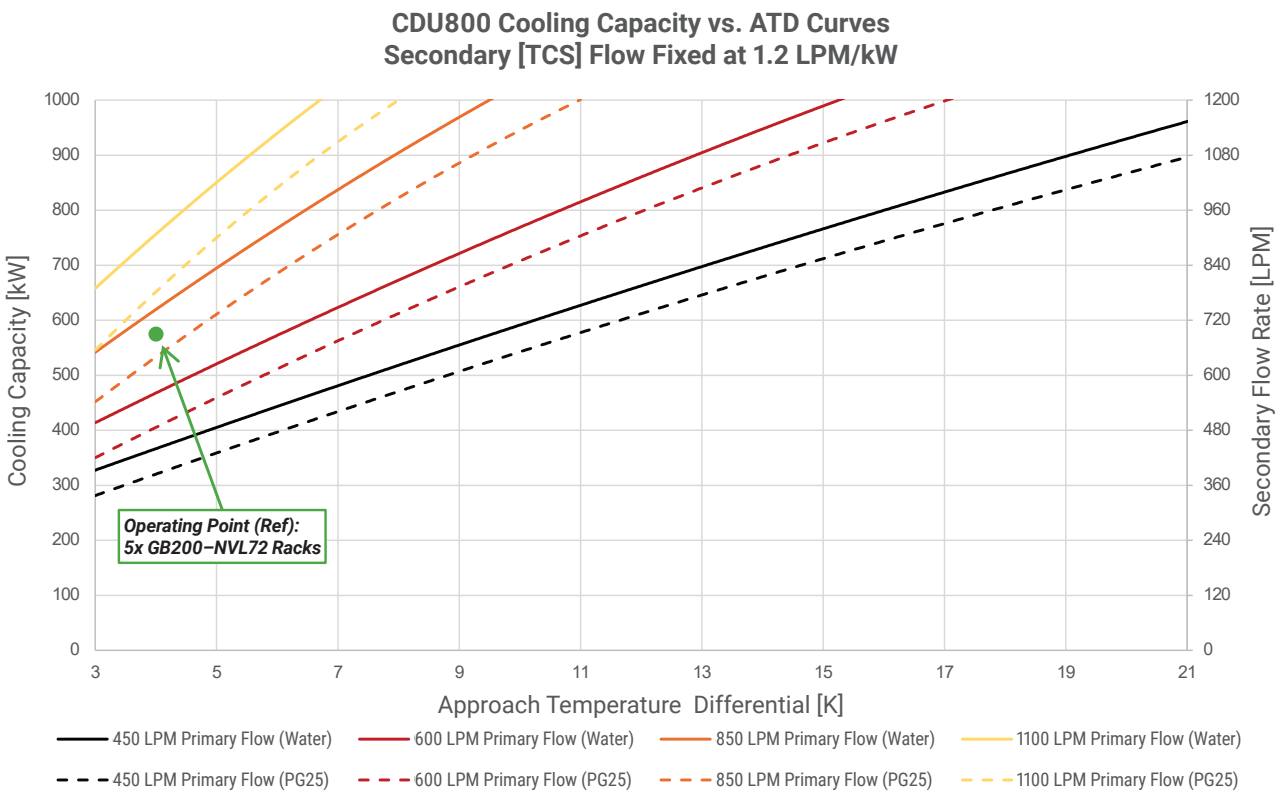
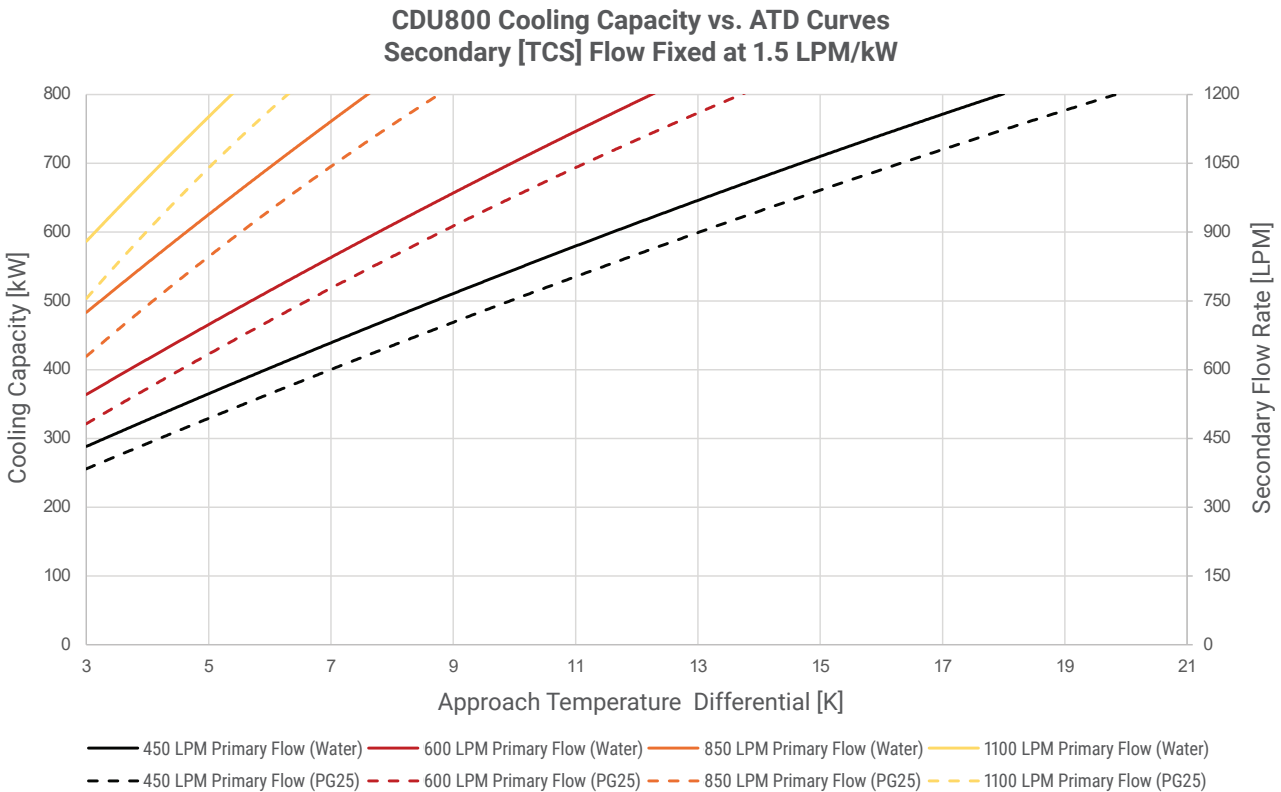


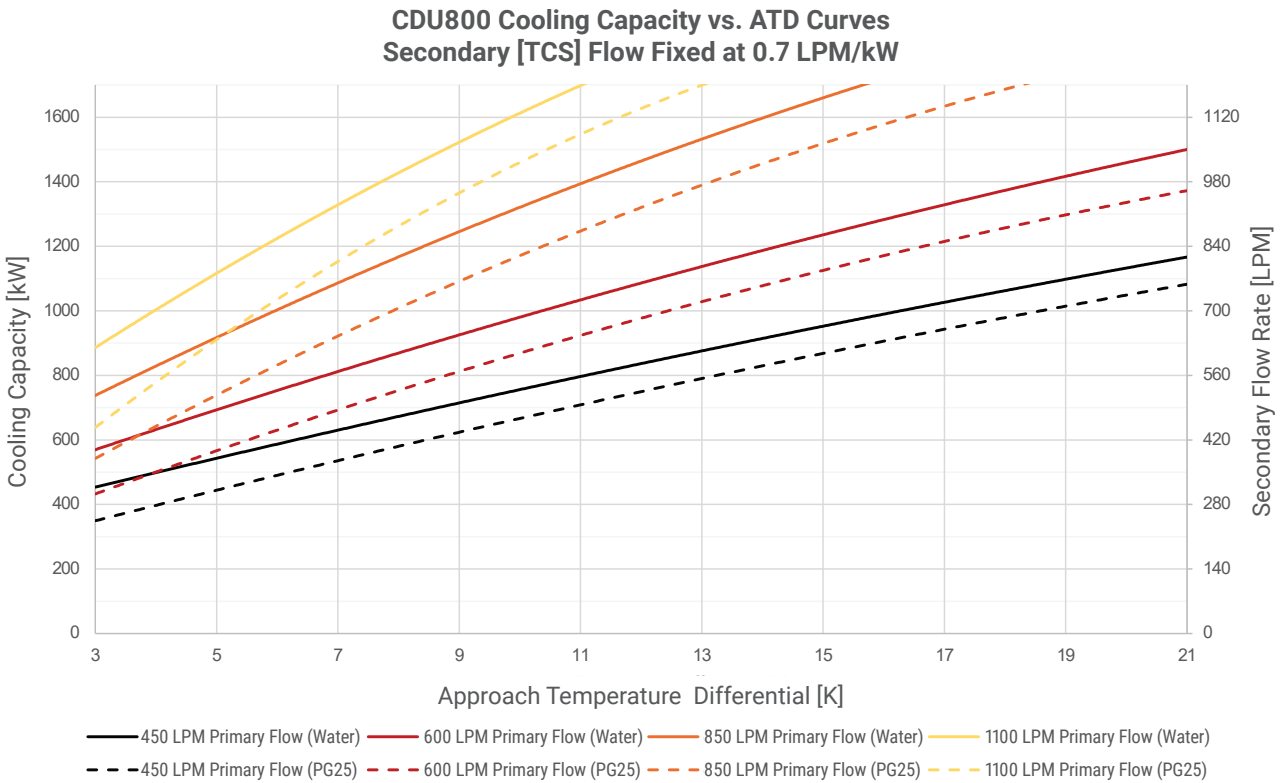
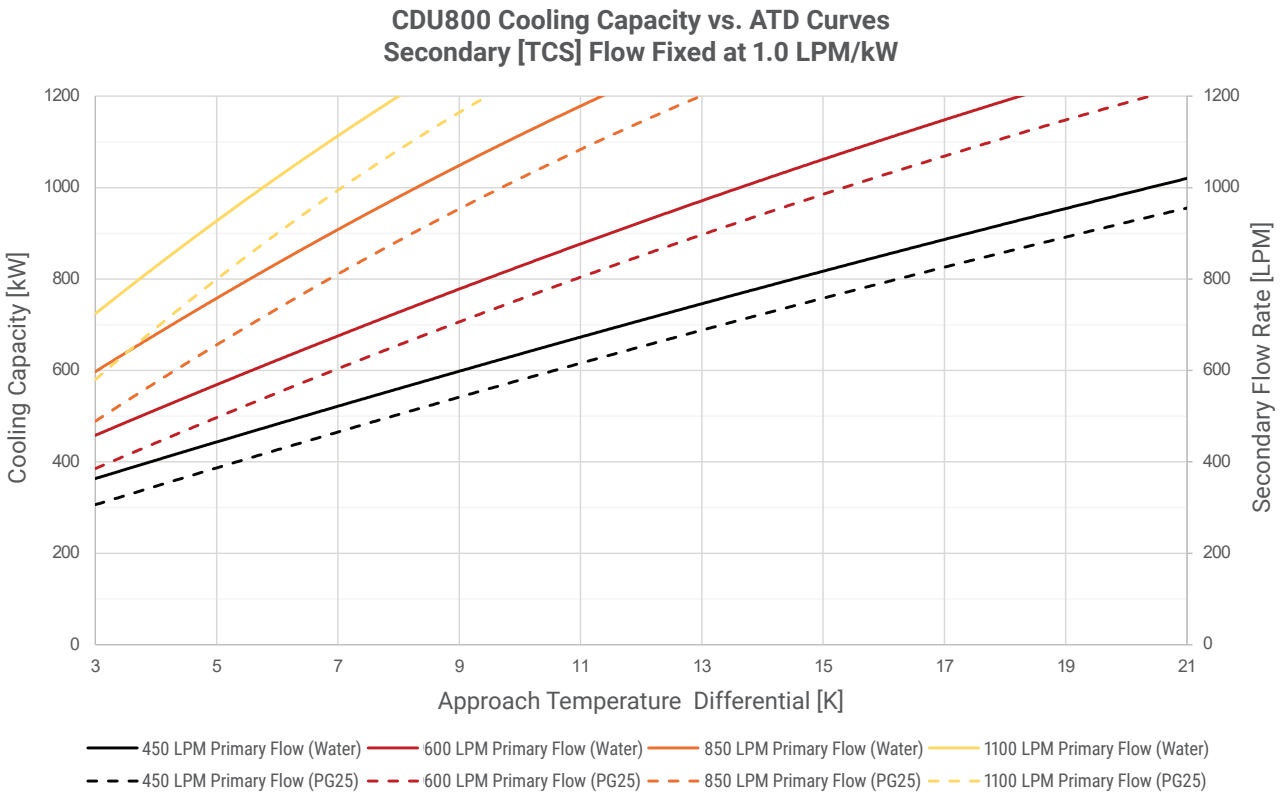
PRIMARY [FWS] P-Q CURVE



SECONDARY [TCS] P-Q CURVE







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